

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

PERSONALIZED MEDIA  
COMMUNICATIONS, LLC,

Plaintiff,

v.

GOOGLE LLC,

Defendant.

Case No. 2:19-cv-00090-JRG

LEAD CASE

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PERSONALIZED MEDIA  
COMMUNICATIONS, LLC,

Plaintiff,

v.

NETFLIX, INC.,

Defendant.

Case No. 2:19-cv-00091-JRG

MEMBER CASE

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**DEFENDANTS' RESPONSIVE CLAIM CONSTRUCTION BRIEF**

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### **NOTE ON CITATIONS**

- References to the Declaration of Johannes Hsu in Support of Defendants' Responsive Claim Construction Brief are noted as "Hsu Decl." References to all exhibits are submitted as attachments to the Hsu Decl. filed concurrently herewith, unless otherwise noted. Numeration begins at Exhibit 30 so as not to overlap with Exhibits 1-21 that were submitted with *Plaintiff Personalized Media Communications, LLC's Opening Brief* (Dkt. 143).
- References to *Plaintiff Personalized Media Communications, LLC's Opening Brief* (Dkt. 143) are indicated by the abbreviation "Br.," followed by the page number being cited. "Br., 5" therefore refers to page 5 of Plaintiff's Opening Brief.
- The patents-in-suit, U.S. Patent Nos. 7,747,217 ("217 patent"), 7,769,344 ("344 patent"), 7,865,920 ("920 patent"), 8,601,528 ("528 patent"), 8,739,241 ("241 patent"), and 9,674,560 ("560 patent"), are attached as Exhibits 1-6 (respectively) of *Plaintiff Personalized Media Communications, LLC's Opening Brief*. All six patents have an identical specification, and so the '217 patent is cited to in this Responsive Brief.
- U.S. Patent No. 4,694,490 ("490 patent") is attached as Exhibit 10 of *Plaintiff Personalized Media Communications, LLC's Opening Brief*. U.S. Patent No. 4,694,490 is referred to as "the '490 patent" in this Responsive Brief.
- "Phase I" refers to the decision in *PMC v. Apple et al.*, Case No. 2:15-cv-01366-JRG-RSP (E.D. Tex. Oct. 25, 2016) that is attached as Exhibit 32 to the Hsu Decl. filed concurrently herewith.
- "Motorola" refers to the decision in *PMC v. Motorola et al.*, 2:08-CV-70-CE (E.D. Tex. Sept. 30, 2011) that is attached as Exhibit 33 to the Hsu Decl. filed concurrently herewith.

- “*Phase 2*” refers to the decision in *PMC v. Apple et al.*, Case No. 2:15-cv-01366-JRG-RSP (E.D. Tex. Oct. 26, 2016) that is attached as Exhibit 34 to the Hsu Decl. filed concurrently herewith.
  - “*Zynga*” refers to the decision in *PMC v. Zynga*, No. 2:12-CV-68-JRG-RSP (E.D. Tex. Aug. 28, 2013) that is attached as Exhibit 44 to the Hsu Decl. filed concurrently herewith.
  - References to the patent-in-suit and ’490 patent are indicated by column and line number, or by claim number. A reference to “’217, 1:15-16” therefore means column 1, line 15 through line 16 of U.S. Patent No. 7,747,217.
  - References to “PMC Tutorial” is Personalized Media Communications, LLC’s Technology Tutorial submitted to the Court and served on the parties on January 10, 2020.
  - References to “Defendants’ Tutorial” is Google’s and Netflix’s Joint Technology Tutorial submitted to the Court and served on the parties on January 10, 2020.
- “*Scientific-Atlanta*” refers to the decision in *PMC v. Scientific-Atlanta et al.*, No. 1:02-CV-824-CAP (N.D. Ga. Mar. 1, 2005) that is attached as Exhibit 46 the Declaration of Johannes Hsu in Support of Defendants’ Responsive Claim Construction Brief filed concurrently herewith.
- “*Amazon 1*” refers to the Patent Owner’s Response to Petition for Inter Partes Review Pursuant to 37 C.F.R. 42.120 dated June 29, 2015, IPR2014-01534, U.S. Patent No. 7,827,587 that is attached as Exhibit 43 to the Hsu Decl. filed concurrently herewith.
  - “*Amazon 2*” refers to the Patent Owner’s Response to Petition for Inter Partes Review Pursuant to 37 C.F.R. 42.120 dated June 29, 2015, IPR2014-01527, U.S. Patent No. 5,887,243 that is attached as Exhibit 45 to the Hsu Decl. filed concurrently herewith.

- “*Apple*” refers to the Final Written Decision dated February 15, 2018, IPR2016-01520, U.S. Patent No. 8,559,635 that is attached as Exhibit 50 to the Hsu Decl. filed concurrently herewith.
- “Term” refers to the term numbers in the Joint Claim Construction Chart the parties submitted for disputed terms, which was filed at Dkt. No. 134-2 in this litigation.



# 1. “television programming / television program” (Term 12)<sup>1</sup>

While the parties agree that “television programming” contains “video and any associated audio information,” they disagree about whether, as Defendants propose, that information must be “transmitted in accordance with a television schedule” and whether, as Plaintiff proposes, *all* audio and video content is “television programming.”

Defendants’ construction is consistent with the plain meaning. As the Examiner noted, at the time of the alleged inventions in the 1980s, “television programming” was sent to viewers on predetermined “*television... schedules*” and “the definition of the word *program*, as it pertains to the [radio and television] broadcast environment, was/is: ‘a *scheduled* radio or television show.’” Ex. 30 (’217, 9/4/01 Office Action) at 356; *id.* at 226 (“*scheduled*” television), 351 (same). Contemporaneous dictionary definitions confirm the plain meaning requires transmission in accordance with a television schedule. Ex. 31 (1980 American Heritage Dictionary) at 989 (“program” in context of radio or television is “[a] *scheduled* radio or television show.”).

That television programming is scheduled is consistent with the specifications of PMC’s patents. They teach that television programming is transmitted in accordance with a “programming *schedule*”: “By comparing identification signals on the incoming program[m]ing with the program[m]ing *schedule*... controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the program[m]ing.” ’490, 11:37-44, ’217, 169:51-57 (same); ’217, 169:58-170:33 (television programming is “*scheduled* for immediate transmission” or recorded and “*scheduled* for time deferred transmission.”). The television programs discussed in the patents are also on a television schedule, for instance “the ‘Wall Street Week’ transmission begins at 8:30 PM on Friday evening.” At no point do they disclose

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<sup>1</sup> The Parties’ proposed constructions can be found charted in the attached Appendix A.

“unscheduled” television programming. ’490, 19:42-48; ’217, 11:25-35. The patents thus support Defendants’ construction of “television programming” by using the term in a manner consistent with its plain meaning, requiring transmission in accordance with a television schedule. *See Bell Atl. Network Servs., Inc. v. Covad Commc’ns Grp., Inc.*, 262 F.3d 1258, 1271-73 (Fed. Cir. 2001).

Nevertheless, PMC argues that Defendants’ construction “evade[s]” a prior construction of a different term—“programming”—that refers to all sorts of “programming,” including “print” and “computer programming.” Br., 3. But the dispute here is the meaning of “television programming,” not the meaning of “programming” generally. The patents acknowledge that different types of programming exist and that “television programming” had a different meaning than other types of programming. ’217, 6:30-38. And the specific issue of whether “television programming” required scheduling was not litigated. Similarly, the *Phase I* and *Motorola* decisions PMC cites did not address whether “television programming” was transmitted on a schedule. They merely declined to limit *different* claim terms to conventional *analog* television signals because the “specification references *digital* television.” *Phase I* at 90-91; *Motorola* at 10.

And while PMC argues that Defendants’ construction “creates uncertainty” with its use of “television schedule” (Br., 3), the meaning of “television schedule” would be easily understood by the jury to refer to television programming schedules on which programs were distributed to viewers (*e.g.*, broadcast and cablecast schedules published in TV Guide). Ex. 30 (’217, 9/4/01 Office Action) at 356 (“**television** broadcast **schedules**”); Defendants’ Tutorial at 13 (TV Guide television schedules). To the extent PMC is genuinely concerned with jury confusion on this issue, Defendants would have no objection using different language to get at this same meaning.<sup>2</sup>

Further, the disclosures that television programming can be recorded do not rebut

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<sup>2</sup> During the parties’ meet and confer pursuant to Local Rule 4-2(c), PMC did not express any concern that Defendants’ construction would create uncertainty or confusion.

Defendants’ construction as PMC asserts. Br., 3-4. Under Defendants’ construction, television programming remains television programming even when recorded for delayed viewing because it was received in accordance with a television schedule in the first place. This is what PMC’s cited excerpts disclose: after it is broadcast “from 7:00 PM to 7:30 PM” the NBC Nightly News may be recorded on video cassette recorder for later playback “based on user instructions.” Br., 4 (citing ’490, 16:43-45); ’490, 16:32-45, Fig. 5. PMC also inaccurately asserts that the patents teach “prerecorded” television programming whose delivery is unscheduled. Br., 3. The patents disclose just the opposite: “prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorders/players *to play according to a given schedule.*” ’217, 171:29-32, 170:14-49 (recorded programming is “*scheduled* for time deferred transmission”).

Moreover, ignoring that television programming is scheduled, PMC’s construction provides that virtually any “audio and corresponding video” would qualify as “television programming,” including security footage recorded at a convenience store, a video game, or a movie rented from the local video store. This is inconsistent with the specification. *See* ’217, 1:37-44 (“television” is not user specific content), 6:37-53 (“television” is a “simplex point-to-multipoint transmission”). PMC’s assertion also improperly renders the term “television programming” synonymous with “audio or video programming,” a separate term used in the patents. *Bd. of Regents of the U. of Texas System v. BENQ Am. Corp.*, 533 F.3d 1362, 1371 (Fed. Cir. 2008) (“Different claim terms are presumed to have different meanings.”) (citation omitted).

## **2. “audio or video programming” (Term 11)**

No construction is necessary for this term because there is no dispute beyond the meaning of the prior “television programming” term, to which PMC ties its arguments. Br., 4. Also, PMC’s proposal improperly replaces “programming” in the term “television programming” with “content of a show, news, documentary, or similar programming,” even though its proposed construction

for the term “programming” alone is “everything that is transmitted electronically to entertain, instruct, or inform, including television, radio, broadcast, print, and computer programming as well as combined medium programming, at least a portion designed for multiple recipients.” Br., 1.

**3. “units of audio or video programming / units of programming” (Terms 11, 40)**

After reciting one antecedent-basis instance of “units of [audio or video] programming,” the claims then always refer back to “said units” or “said plurality of units.” *E.g.*, ’920 cls. 7, 12; ’560 cl. 5. It is black letter law that after a term is introduced either with an indefinite article or without any article, the use of “the” or “said” makes clear the referenced element is the *same* as the previously introduced element. *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1306 (Fed. Cir. 2005) (use of “a” followed by the use of “the” indicates reference to the same “destination processor”) (abrogated on other grounds, *see IRIS Corp. v. Japan Airlines Corp.*, 769 F.3d 1359, 1361 n. 1 (Fed. Cir. 2014)); *Eaton Corp. v. Rockwell Int’l Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003). Thus, notwithstanding PMC’s argument that “the specification is clear that relevant units of programming need not be treated as a static element” (Br., 5), the language of each *claim* makes clear the “units” first mentioned in the claim are the same ones used throughout.<sup>3</sup>

**4. “programming” (Term 13)**

There are no disputes directed at the meaning of the term “programming” alone, and Defendants have provided constructions for the specific types of “programming” that are disputed so no construction is needed beyond those terms. PMC’s construction may confuse the jury, requiring it to distinguish between “programming” as a “noun” and as a “verb,” and including confusing terms that are themselves undefined, such as, “combined medium programming.”

**5. “[programming] origination stations” (POS) / “intermediate transmission stations”**

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<sup>3</sup> To narrow the issues before the Court, Defendants agree that no construction of this term is necessary aside from the clarification that the units are the same throughout each claim.

**(ITS) (Terms 24-25)**

PMC repeatedly acted as its own lexicographer for the terms “[programming] origination stations” (hereinafter “POS”) and “intermediate transmitter station[s]”/“intermediate transmission station[s]” (hereinafter “ITS”). In the specification, PMC said: “Hereinafter, stations that originate broadcast transmissions *are called* ‘original transmission stations,’ [and] stations that receive and retransmit broadcast transmissions *are called* ‘intermediate transmission stations’ ... .” ’217, 21:47-50. PMC also expressly defined the term “broadcast,” found in those express definitions in the specification to require “over-the-air” transmissions when it said that these “stations may transmit programming over-the-air (hereinafter, ‘broadcast’) or over hard-wire (hereinafter, ‘cablecast’).”<sup>4</sup> *Id.* at 7:14-16; *see also* ’490 at Abstract. In addition, the patent consistently uses broadcast to refer to (over-the-air) point-to-multipoint transmission. *See, e.g.,* ’217, 6:48-52 (“It is the further purpose of this invention to provide means and methods whereby a simplex point-to-multipoint transmission (such as a television or radio broadcast) can cause simultaneous generation of user specific information at a plurality of subscriber stations.”); *compare id., with id.* at 6:62-63 (replacing “point-to-multipoint” in “simplex point-to-multipoint transmission” with “broadcast”).

By using quotation marks along with language including “hereinafter” and “are called,” the specification leaves no doubt that the statements regarding POS, ITS, and “broadcast” are definitional. *Sinorgchem Co. v. ITC*, 511 F.3d 1132, 1136 (Fed. Cir. 2007) (use of quotation marks in specification is “often a strong indication” of definitional statement); *TriStrata, Inc. v. Microsoft Corp.*, 594 F. App’x 653, 655 (Fed. Cir. 2014) (affirming district court finding that patentee acted

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<sup>4</sup> In conformity with this definition, in a prior PMC case, the court construed “broadcast” to mean “an over-the-air transmission from one location to many locations.” *Motorola* at 12-15. In the course of reaching that decision, Judge Everingham rejected the very arguments PMC repeats here—holding that “the list of ‘network transmission means’ [that includes over-the-air as well as other means, *e.g.* ’217, 11:62-12:14)] *does not define or expand* ‘broadcast.’” *Id.* at 14-15.

as his own lexicographer regarding term “seal” by using “is called”/“are called” language, such as “the encoded key *is called* a ‘seal’” (emphasis in original)).<sup>5</sup> PMC even submitted a “glossary” of “defined terms” (including POS, ITS, and “broadcast”) during prosecution of the ’805 application (from which the ’241 patent claims were imported, *see* Ex. 60 (’890, 9/22/00 Amendment and Appendix D) as well as at least a dozen other applications. Exs. 61-74. The glossary included the same definitions of POS, ITS, and “broadcast” that are in the patents discussed above. This Court has already found these specification passages and glossary “act[] as a clear statement of lexicography.” *Phase 1* at 73. Consistent with its lexicography, PMC previously stipulated to construing “broadcast” as “an over-the-air transmission from one location to multiple locations.” *Phase 2* at 9.

In addition to providing explicit definitions, the specification uses the terms to reference stations capable of originating (POS) or receiving (ITS) ***over-the-air***, one-to-many transmissions. *E.g.*, ’217, 11:35-43 (“Said network transmission means may include so-called landlines, ***microwave transmissions***, a ***satellite transponder***, or other means.”<sup>6</sup>), 167:64-168:5, Fig. 6 (depicting same); *see also* ’490, 10:26-39, Fig. 3. Such consistent usage makes sense given the patents’ emphasis on automating ITS, which receive programming via, among others, ***over-the-air*** (broadcast) means, *see, e.g.*, ’217, 7:10-16, and it further strengthens the patents’ explicit definitional statement. *Bell*, 262 F.3d at 1271-73 (Fed. Cir. 2001) (“[W]hen a patentee uses a claim term throughout the entire patent specification in a manner consistent with only a single meaning,” such term has been defined by implication.”).

<sup>5</sup> This stands in contrast to the conditional language, such as “may be,” used in PMC’s cited *Cadence Pharmaceuticals Inc. v. Exela PharmSci Inc.*, 780 F.3d 1364, 1369 (Fed. Cir. 2005).

<sup>6</sup> Contrary to PMC’s argument, this passage cannot contradict the explicit definition of POS and ITS given that the specification defines POS and ITS only at column 21 of the specification (***after*** this passage) and using “hereinafter” language.

Despite this clear lexicography, PMC asserts that the Court can ignore the glossary because it states that the “terms are defined and used in specific ways” in the specification. Br., 9. But, as this Court has already found, the glossary recites those very definitions from the specification. Otherwise, what would the point of the glossary be? PMC is essentially saying that this voluminous document it provided numerous times in connection with prosecution should be ignored altogether. Moreover, because PMC’s own lexicography defines POS and ITS by reference to the (further defined) term “broadcast,” its reliance on the *Phase I* ruling that “the method of transmission of signals” should not be construed in the context of “origination stations” (Br., 8). The term “broadcast” is part of PMC’s lexicography and must be considered in construing POS and ITS.

PMC also argues that Defendants’ proposed constructions are inconsistent with the specification because they would require that “origination stations **only** transmit over-the-air” and that ITS be limited to “**only** receive and transmit over-the-air.” Br., 7-9. This is a strawman—“only” does not appear in Defendants’ proposed construction. While POS and ITS, respectively, must have the *ability* to originate or receive transmissions sent over-the-air, as the intrinsic evidence requires, nothing in Defendants’ constructions forecloses POS and ITS from **also** originating or receiving (and retransmitting) transmissions via other methods. For example, the fact that dependent claims 13 and 14 in the ’920 patent require “cablecast programming channels” means only that an ITS within the scope of those (unasserted) dependent claims must have **both cablecast and broadcast** transmission means. For the same reason, Defendants’ constructions do not read out any embodiments with both cablecast and broadcast transmission means. Br., 10. PMC similarly misconstrues Defendants’ proposals as meaning that “origination stations **cannot make** point-to-point transmissions” and that ITS are **limited** to transmitting “from one location to many locations.” Br., 7-8. But under Defendants’ proposed constructions, SPAM signals can be

transmitted via any number of means (including one-to-one or one-to-many), but POS and ITS still *must* do over-the-air, point-to-multipoint (*i.e.*, broadcast).

**6. “transmitter station” (Term 26)**

The claims require a “transmitter station” to transmit television or multimedia signals. ’528, cl. 32; ’217, cls. 1-2, 16. PMC has provide no evidence that “transmitter station” is a term of art and the only “transmitter station” disclosed in the specification that transmits television or multimedia signals is the POS and ITS. *E.g.*, ’217, 149:47-67, 230:58-231:2. The disclosed “remote stock-price-data-transmission station” does not do so. *Id.* at 231:47-53. Accordingly, a POSITA would understand that, by referring to “transmitter station,” the claims are referring to the POS or ITS and Defendants’ construction should be adopted.<sup>7</sup> *Kinetic Concepts, Inc. v. Blue Sky Medical Group, Inc.*, 554 F.3d 1010, 1019 (Fed. Cir. 2009) (limiting “wound” to “skin wound,” where all of the examples in the specification involved skin wounds, and allowing the claims to cover other types of wounds would “expand the scope of the claims far beyond any-thing described in the specification.”); *Wisconsin Alumni Research Foundation v. Apple, Inc.*, 905 F.3d 1341, 1351-1352 (Fed. Cir. 2018) (similar).

**7. “automatically controlling the operation of said intermediate transmitter station” (Term 31)**

PMC added this phrase in claim 16 of the ’241 patent to overcome a rejection based on the prior art combination of *Lambert* in view of *Kelly*. PMC explained that the ITS in *Lambert*, a cable station, transmits programming at a scheduled time in response to a subscriber telephoning the cable station and inputting a number corresponding to a desired program. Ex. 35 (’241, 10/17/13 Amendment) at 4-5, 8-9, 29-30. PMC argued that such a disclosure “fails to arrive at the claimed

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<sup>7</sup> PMC argues Defendants’ construction of “transmitter station” is incorrect because it would give the term the same meaning as ITS or OTS. Br., 10. But Defendants’ construction gives transmitter station a different meaning than OTS or ITS because the construction covers *both*.



invention” because claim 16 does *not* cover an ITS that uses subscriber inputs to operate:

Specifically, *the transmitter station disclosed in Lambert operates based on subscriber input*...Even if the television viewing system of Lambert were modified to include the tier-access program codes of Kelly, the television transmitter station would still be controlled based on the input provided by the subscriber. *In contrast, in embodiments of the invention, the television transmitter station is controlled by a control signal originated at an origination station.*

*Id.*, 39. PMC then stated: “[t]o clarify this distinction, Applicants have amended the claim to recite the control signal automatically controlling the operation of the remote television transmitter station, *i.e., without subscriber input.*” *Id.* (underline in original). Because PMC added the phrase under construction to distinguish the prior art and stated what that phrase meant—namely that (as reflected in Defendants’ proposal) the operation of the remote television transmitter station must be controlled “without subscriber input”—PMC cannot now reclaim the broader construction it asserts. *Seachange Intern., Inc. v. C-COR, Inc.*, 413 F.3d 1361, 1372–73 1385 (Fed. Cir. 2005) (“[w]here an applicant argues that a claim possesses a feature that the prior art does not possess in order to overcome a prior art rejection” the argument “can narrow the scope of otherwise broad claim language.”); *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1333-1334 (Fed. Cir. 2003).

The patents also do not disclose that an ITS operates with subscriber input. *See Br.*, 11. And PMC’s citations do not teach subscriber input for controlling an ITS. *See* ’490, 11:18-21 (“input information” from “remote sources” or “local input,” not a subscriber), ’217, 285:23-55 (input doesn’t control and is to remote site), 231:59-67 (computer calls “data service computer,” not ITS).

**8. “said identified storage locations are different for each of said units of audio or video programming” (Term 36)**

’920 patent claims 7 and 12 require that the “storage locations” of “each of said units” be “different,” but neither the claims nor the specification identify what “storage location” must be “different.” Is it the “location” on or within a “storage” unit itself, a “location” where “storage”

unit is on a device, or must “storage” units not be in the same place (e.g., in a room). The claims do not say. Nor does the specification. Even PMC’s cited example, which does not say anything about what it means for a storage location to be “different” in any event, is ambiguous as to whether the referenced “locations” of units is reference to tape recorders 76 and 78 (*i.e.*, different storage devices), where units Q, Y, W, and D, are recorded on those tape recorders, or something else. Br., 12 (citing ‘217, 171:29-39). Moreover, data always occupies some “location” within a memory device from which it can be found, as distinct from where other data is stored. So to say that, as PMC does, that “storage locations” of “each of said units” in the claims can be “different” merely by being in a different place within a storage device (Br., 11-12) would render this language in the claim meaningless. *Novo Indus., L.P. v. Micro Molds Co.*, 350 F.3d 1348, 1357-58 (Fed. Cir. 2003) (finding claim indefinite notwithstanding patentee’s argument that claim could be made definite by deleting certain claim language). Claim 12 of the ’920 patent is also indefinite because “said identified storage locations” lacks antecedent basis. The claim refers only to “storage *devices*.” *See, e.g., In re Packard*, 751 F.3d 1307, 1310, 1314 (Fed. Cir. 2014) (affirming finding of indefiniteness based on limitations that “lacked an antecedent basis”). PMC’s own argument—that “[a] ‘storage location’ is distinct from a ‘storage device’” (Br., 12 n.4)—shows that the claim’s recitation of “storage devices” is not a proper antecedent basis.

#### 9. “control signal” (Term 1)

Defendants’ construction—“a signal that tells a device to perform a function; a control signal is not computer programming”—is consistent with the definitions and limitations placed on the term during prosecution. When distinguishing the “control signal” over prior art Kelly, PMC explained:

[T]he program code disclosed in Kelly does not amount to a control signal. Specifically, nothing in Kelly teaches or suggests that program codes ***control a controllable device at a receiver station to perform a function*** ... Nothing in Kelly indicates that the program code ***tells*** the decoder how to operate or how and where to look for

signals or to communicate other information.

Ex. 36 ('241, 09/10/12 Amendment) at 70 (emphasis in original). Thus, PMC distinguished Kelly's program code on the ground that, unlike a control signal, it does not tell a device (*e.g.*, the decoder) to perform a function (*e.g.*, to communicate). *Id.* The Court should adopt Defendants' construction of "a signal that tells a device to perform a function." *Seachange*, F.3d at 1372–73.

PMC also repeatedly distinguished "control signals" from computer programming. For example, to overcome prior art, PMC stated "[t]he specification ... make[s] a distinction between control signals and computer programming and each serves a *separate and distinct function*, therefore the two cannot be interpreted to be the same thing." Ex. 37 ('560, 01/14/14 Amendment) at 66; *id.* at 50, *see also* Ex. 38 ('560, 12/24/14 Appeal Brief) at 67 (same). As PMC explained, "[c]omputer programming is executed to govern what is done by a computer [*sic*] while a control signal governs when and what executes the computer programming." Ex 38 ('560 FH, 12/24/14 Appeal Brief) at 68.<sup>8</sup> Thus, the Court should construe this term to reflect the fact that "a control signal is not computer programming," as Defendants propose. *Omega*, 334 F.3d at 1334.

Plaintiff's tautological construction of "a signal that controls" ignores this intrinsic evidence, and PMC's counterarguments are flawed. PMC's reliance on a construction of a "valve control signal" in *Phase 2* (Br., 12) is misplaced because that is a different term and the above prosecution statements were not before the court during *Phase 2*. PMC also argues control signals include computer programming because the specification says that "[t]he information of SPAM signals includes ... computer program instructions ..." Br., 12. But even accepting PMC's reading

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<sup>8</sup> These statements, during the prosecution of two later-issued asserted patents, are equally relevant to the meaning of "control signal" in the earlier sibling asserted patents sharing the same specification discussed in these statements. *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340 (Fed. Cir. 2004) (file history statement that "expressly related to the specification shared by all three patents" was applicable to all patents with that specification); *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1307 (Fed. Cir. 2007) (same for prior-art disclaimers).

of the specification, it cannot overcome the disclaimer from its clear prosecution statements that control signals are not computer programming. *Uship Intell. Prop., LLC v. U.S.*, 714 F.3d 1311, 1315-16 (Fed. Cir. 2013) (“even if the specification had disclosed an embodiment where a human performed the entirety of the validation step,” prosecution disclaimer could result in that embodiment not being covered by the claims). Nor is PMC’s assertion that the Court rejected the argument that signals must immediately trigger action and thus cannot be computer programs (Br., 13) relevant because Defendants are not making that argument. Defendants are relying on PMC’s statements to the Patent Office that exclude computer programming, and were not before the Court.

#### **10. “identification information” (Term 33)**

“Identification information” is not a term of art. PMC does not contend otherwise or provide any instance of its use outside the patents. “Where a claim term has no ordinary and customary meaning, a court must resort to the remaining intrinsic evidence...to obtain the meaning of that term.” *Goldenberg v. Cytogen, Inc.*, 373 F.3d 1158, 1164 (Fed. Cir. 2004). Because Defendants’ construction, a “programming schedule,” is the only disclosure in the patents that corresponds to the claim language’s use of the phrase, it should be adopted. *Indacon, Inc. v. Facebook, Inc.*, 824 F.3d 1352, 1357 (Fed. Cir. 2016) (terms with no established meaning “ordinarily cannot be construed broader than the disclosure in the specification”).

Here, “programming schedule” is the only disclosure of the claimed “identification information” in the intrinsic record. For example, Claims 22 and 30 of the ’241 patent recite that an ITS stores “identification information designating programming to be transmitted,” and transmits television programming based on “comparing [a] first signal to said identification information.” A “programming schedule” (stored at the ITS) is the only thing in the specification to which that “first signal” is compared to transmit television programming and, thus, the only thing disclosed as the “identification information.” In particular, the specification discloses a

“programming schedule” is stored at the ITS (’490, 11:21-31; ’217, 168:47-63), and then says the ITS determines “when and on what channel or channels to transmit the programming” by “*comparing identification signals* on the incoming programming *with the programming schedule*” (’490, 11:32-43; ’217, 169:31-170:12).<sup>9</sup> It thus teaches the programming schedule is the “identification information” against which the first signal is compared.

Nevertheless, PMC points to the citation above that the ITS can “compare identification signals on the incoming programming with the programming schedule received earlier” to argue that Defendants are reading out the “program unit identification code” in the “identification signal.” Br., 14. But the phrase at issue is “identification *information*” not “identification *signals*.” The claim language makes clear that the “program unit identification codes” are part of the “first signal” that is *compared with* the separate “identification information” resident on the ITS. ’241 patent, cls. 22 (“comparing said first *signal* to said *identification information*”), 27 (“wherein said first signal comprises a first identification signal identifying said television programming...”).

PMC’s citations to passages saying that “program unit identification codes” can be compared with the “program unit information” are also irrelevant. Br., 13-14 (citing ’217, 130:34-51 and 140:30-38). These disclosures relate to processing and monitoring availability of programming at the receiver station, *not comparing a first signal to identification information at the ITS* to determine how television programming should be transmitted to the receiver station. ’217, 129:62-130:51 (program unit compared by receiver station to determine if there is a “new program”), 140:30-38 (program unit used to monitor and collect programming records).

# **11. controlling the operation and identification of signals by controlling how and where**

<sup>9</sup> Similarly, asserted claim 23 recites the identification information “comprises a second identification signal designating at least one of a transmission time and a transmission channel.” The patents disclose a programming schedule may “indicate when on which channel or channels the head end facility should transmit each program unit.” ’490, 11:17-31; ’217, 169:1-22.

**to search for signals” (Terms 18-19)**

The parties agree that these phrases apply to the ITS. The ITS contains a signal processor that “can monitor any combination of inputs and transmission frequencies” while examining various modes of transmission. *See* ’217, 18:4-7, 7:64-8:15. Defendants’ construction reflects this description by construing the disputed phrases as “controlling the frequency and mode of transmission that the intermediate transmission station searches for signals.”

In contrast, PMC’s construction, “the manner in which embedded signals and associated programming are located and/or accessed at an intermediate transmitter station,” impermissibly changes the phrase “how and where” to “the manner,” which encompasses at least “when” in addition to “how and where.” *Id.* at 169:9-15. PMC also replaces “signals” with “embedded signals and associated programming” even though the claim language is clear that it is “signals” that are searched, not “*embedded signals and associated programming*.” Further, PMC broadens “search” to “locate[] and/or access[].” Br., 14-15. But “search” and “access” are in no way synonymous—e.g. a person can access their personal computer system without searching for it.

PMC argued that the disputed phrase does not require controlling the frequency that the ITS searches for signals because it alleges programming may be input into decoders at fixed frequencies, “[y]et the decoders must still be told where and how to look for signals within that fixed frequency.” Br., 14-15. But PMC’s citations merely teach that the ITS has means to instruct decoders “how and where to search for SPAM information,” which is done by controlling the frequency that decoders use to search for signals. ’490, 12:12-21, 4:17-30, 7:17-21.

**12. “media/medium” (Term 4)**

Defendants’ construction—“a channel of communication, such as radio, television, newspaper, book, or Internet”—should be adopted because it is the plain meaning of the term at the time of the alleged inventions in the 1980s. Ex. 39 (1977 Webster’s New College Dictionary) at

714 (defining “medium” as a “channel of communication.”). Further, PMC argued to the Patent Office that “‘medium’ and ‘media’ ... connote a channel of communications,” and that “the ‘content’ of a medium should be interpreted to mean the substance, gist, meaning or significance of a channel of communications.” Ex. 40 (’217, 03/07/05 Appeal Brief) at 32-33. The Board agreed and defined a “medium” as a “channel of communication such as radio, television, newspaper, book or Internet.” Ex. 41 (’217, 01/13/09 Decision on Appeal) at 23. After continued prosecution, the Notice of Allowance made clear that a reason for allowance was this construction of “medium”:

3. Claims 2, 5, 6, 8-10, 15-18, 20, 21, 23-27, 29, 33, 34, 36-42, 67, 69-71, 73-76, 78, 79, 81, 82, 84, 85, 87, 89-91, 93-97, 99-102, 105 and 106 are allowed.

In regard to said claims the prior art of record fails to teach or suggest the respective claim limitations when considered as a whole and when read in light of the following interpretations disclosed by the Board of Patent Appeals and Interferences in the 1/13/09 decision:

- **medium** – a channel of communication such as radio, television, newspaper, book or Internet (p. 23)

Ex. 42 (’217, 02/25/10 Notice of Allowance) at 2. There is no reason to deviate from the plain meaning or to allow PMC to disavow the definition it advocated for. *Jack Guttman, Inc. v. Kopykake Enter., Inc.*, 302 F.3d 1352, 1361-62 (Fed. Cir. 2002) (district court erred in construing a claim term contrary to the explicit definition provided by the applicant in the prosecution history).

PMC argues the specification discloses that “a medium is a form (not a channel) of electronically transmitted programming.” Br., 16 (citing ’217, 201:44-47). But PMC’s citation does not equate “forms of electronically transmitted programming” with “medium”—it simply says the system can transmit any form of electronic programming. ’217, 201:44-47 (identifying “data,” which is not a type of medium, as a “form of electronically transmitted programming”). The specification also does not support PMC’s position. For instance, it teaches that television, radio and broadcast print are separate mediums. ’217, 1:30-44. These mediums can include

multiple forms of electronic programming (*e.g.*, television includes audio and video), yet the specification refers to them as one medium because they are one communication channel. '217, 44:17-44 (television, radio, and broadcast print are different “communication medium[s]”). In any event, here too, even if PMC were correct in its interpretation of the specification, that cannot overcome the clear and unambiguous definition PMC gave the Patent Office and which the Patent Office adopted in allowing the claims. *Seachange*, F.3d at 1372-73; *Omega*, 334 F.3d at 1334.

Further, contrary to PMC's suggestions, Defendants' construction was not rejected in *Phase 2*. *Phase 2* rejected PMC's arguments and ruled in conformity with Defendants' position. Specifically, PMC argued “media/medium” are forms of electronically transmitted programming, such as “audio, video, text, computer graphics, and/or computer presentations.” *Phase 2* at 18. “At the oral hearing, it became clear that the parties' dispute centered upon whether digital television is a single media or two media.” *Id.* at 22. PMC argued that “digital television result[s] in two media,” an audio medium and a video medium, which the Court rejected: “[T]he Board's and PMC's statements in the appeal passages, cited by Defendants above, make clear that television is viewed as a single media.” *Id.* at 24. Rather than analyze defendants' proposed construction of “channel[s] of communication, such as radio, television, broadcast print, or Internet,” the Court instead decided to resolve only the dispute before it (*i.e.*, whether television programming was one, or more than one medium) by adding to the end of PMC's construction the phrase “television programming (including its video and audio components) is a single form of media.” *Id.* at 25.

In the instant case, the dispute centers around the Internet medium rather than television. Thus, if this Court is inclined to adopt its *Phase 2* construction, it should update the construction to address the dispute in the instant case by replacing “television... is a single medium” with “Internet is a single medium.” Like television, Internet is a single channel of communication and



thus one medium, regardless of whether it includes audio, video or other information. *See, e.g.*, Ex. 42 ('217, 02/25/10 Notice of Allowance) at 2; *see also* '217, 93:44-49 ("computer medium"), 127:23-29 (same), 10:28-31 (Fig. 7D is a "radio medium" combined with audio from a "computer medium" and Fig. 7E is a "television" medium combined with video from a "computer" medium), 240:33-36 ("broadcast print" medium combined with text from a "computer" medium).

### **13. "create a series of discrete video images" (Term 27)**

Defendants' construction, "bringing into existence a series of discrete video images and not simply selecting or retrieving a series of discrete video images from the external source," properly accounts for the fact that (1) "create" means "bring into existence" and that (2) "creating" is different from "selecting or retrieving." PMC does not dispute this. Indeed, PMC advanced these same interpretations before the Board. *See Amazon I* at 21 ("The ordinary meaning of 'generate' is to 'create' or 'bring into existence.'"); *id.* at 22 (information is brought into existence "***not merely by retrieving or selecting data***") (emphasis in original). The claim recites "processing a control signal at said receiver station ... to create a series of discrete video images." '217, cl. 20. Thus, discrete images cannot be created at an external source because the claim expressly recites that processing the control signal *at the receiver station* is what creates the images. *Id.*

Although PMC provides no construction of its own, it contends the specification is inconsistent with Defendants' construction. Yet, all of PMC's cites are consistent with Defendants' construction. For example, although *video* may be received from an external source ('217, 149:47-51, 10:65-11:4, 11:20-23, 260:10-23), that *video* is then processed to create *discrete video images* (*e.g.*, overlays) at the receiver station. *Id.* at 253:1-15 (generating overlay at receiver station), 260:10-23 (same), '490 at 19:53-20:7 (same). Importing and creating are not the same and the Court should not allow PMC to conflate them.

### **14. "generate information based on said second medium" (Term 28)**

PMC previously admitted to the Patent Office that processing data to “generat[e] information” “requires more than mere selection or retrieval; it requires the creation of a product through processing.” *Amazon 1* at 22. Here, the claim recites “processing...to generate information.” ’217, cl. 16. Adopting PMC’s admission, Defendants properly construe this term as “to bring into existence information at the receiver station, as opposed to selecting or retrieving information transmitted to the receiver station.”

**15. “video / video image” (Term 17)**

There is no reason to construe these terms, whose meanings is clear even to a layperson. PMC does not dispute this fact, but proposes modifying the construction in *Zynga* (where PMC itself argued these terms needed no construction, *see Zynga* at 11) to limit video images to those “capable of showing movement” and exclude those only capable of showing “change.” PMC’s modification is inconsistent with the primary Wall Street Week embodiment, which discloses a video image overlay capable of showing change (not movement). ’217, 13:29-14:28, Fig. 1A.

**16. “coordinating / coordinate / coordinated / combining” (Term 6)**

These terms appear in the claims of the ’217 patent, which recite the step of “coordinating” or “combining” a first and second medium. PMC does not dispute the portion of Defendants’ construction that recites “to place or arrange (elements) in proper position relative to each other.” Br., 18.<sup>10</sup> Instead, the dispute is whether the terms require the elements to be placed or arranged “automatically and without manual instruction,” as the intrinsic evidence requires.<sup>11</sup>

<sup>10</sup> Indeed, PMC has advocated for similar constructions in prior proceedings. *Amazon 2* at 17-22; *Scientific-Atlanta* at 523-525.

<sup>11</sup> PMC argues that Defendants “conflate” the term “coordinating” and “combining.” Br., 17-18. But this is a strawman because the sole dispute for these terms is whether coordinating or combining requires automation without manual instructions. Also, PMC admits that the term “‘combining’ is narrower than ‘coordinating.’” *Id.* So, if “coordinating” requires automatically arranging or placing elements, PMC can’t dispute the “narrower” term would also.

“[W]here the general summary or description of the invention describes a feature of the invention ... and criticizes other products ... that lack that same feature, this operates as a clear disavowal of these other products.” *Astrazeneca AB v. Mutual Pharm. Co.*, 384 F.3d 1333, 1340 (Fed. Cir. 2004). Here, the PMC patents disparage the prior art for “lack[ing] the capacity to ***automatically coordinate***” multi-media presentations. ’490, 2:22-28, 1:14-23 (disparaging prior art “co-ordination” because it required “manual processing”). Further, the patents state that “automatically” coordinating the first and second medium is a feature of the invention—not a preferred embodiment. ’490, 3:51-60 (“This method provides techniques whereby, ***automatically***, single channel, single medium presentations, be they television, radio, or other electronic transmissions, may be recorded, ***coordinated*** in time with other programing...”); ’217, 7:22-27 (“purpose of this invention to provide means and methods for the ***automation*** of ultimate receiver stations, especially the automation of ***combined*** medium and multichannel presentations.”), *id.*, 1:21-29. And the applicants relied on this automation to distinguish the prior art—which they characterized as lacking “video inputs [that] can be ***automatically combined*** ... to display user specific information in conjunction with a transmitted program.” Ex. 47 (’490, 10/04/84 Amendment) at 6; Ex. 48 (’490, 07/09/85 Amendment) at 6.

Without exception, the embodiments described in the patents also “automatically” coordinate and output a presentation. For instance, in the Wall Street Week example television and graphics overlays are arranged in a proper position and outputted “[u]nder control” of program instructions in SPAM messages. ’217, 13:29-14:52, 47:1-3 (“All subscriber station apparatus are fully preprogrammed to perform ***automatically*** each step of each example. ***No manual step*** is required at any station.”), 21:40-42 (“SPAM signals control and coordinate a wide variety of subscriber stations.”). Even PMC’s cited examples of the “Julia Childs” and “Exotic Meals of

India” (Br., 18) are illustrations of automatic coordination. Both disclose that—before any processing, coordinating, or outputting takes place—a user may select whether or not they would like to receive a coordinated print media by entering a code. ’490, 20:17-28; ’217, 242:62-243:2. Then “five minutes later,” the system checks whether the code was received and, if so, the receiver station *automatically* coordinates, outputs and displays the presentation. *Id.* at 244:25-57.<sup>12</sup>

#### **17. “coordinated presentation” (Term 7)**

Even though PMC argues no construction is needed for coordinating, it asserts this term requires construction as “an organized presentation of several media related by content.” (Br., 18-19). Initially, construing the “coordinating” terms, as Defendants propose, renders construction of “coordinated presentation” unnecessary because the term is understood to refer to the presentation resulting from coordinating. In fact, PMC agreed in prior cases that “coordinated presentation” needed no construction. *Motorola* at 82. Further, PMC’s construction is also inconsistent with prior proceedings where it argued that under the broadest reasonable interpretation, a coordinated presentation is one whose elements are placed or arranged in a proper position relative to each other. *Amazon 2* at 17-22.

#### **18. “outputting and displaying said multimedia presentation” (Term 8)**

Similar to the “coordinating” dispute, the parties dispute whether the “outputting and displaying said multimedia presentation” is done without manual input, as Defendants propose. The specification teaches that “[a]ll subscriber station apparatus are fully preprogrammed to perform *automatically* each step of each example. *No manual step* is required at any station.” ’217, 47:1-3. The intrinsic record confirms automation is a basic purpose of the invention. ’217, 7:22-25; Ex. 47 (’490, 10/04/84 Amendment) at 6; Ex. 48 (’490, 07/09/85 Amendment) at 6.

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<sup>12</sup> PMC also cites to the Court’s decision in *Motorola*, which is inapposite because that case addressed different issues. *Motorola* at 28-34.

*Astrazeneca*, 384 F.3d at 1333. Here too, PMC’s examples do not support its position because the user inputs occur before any processing, coordinating, or outputting. *See supra* Section 16.

**19. “explain[s/ing] a significance / ... [content/information ] ... explains/explaining [a/said] significance of ... [presentation/information/video image]” (Term 20)**

The term “explain[s/ing] a significance” is indefinite because the claims and the specification leave the boundaries of the word “significance” undefined. What one person finds significant, another may not. The specification lacks any discussion about how and to whom the significance is explained. Although PMC cites portions of the specification that describe providing “generally applicable” information to multiple users (Br., 20-21), those portions say nothing about explaining the significance to *any* identified user. Further, issue preclusion does not apply and this Court should decline PMC’s request to copy a determination from a different case (*id.* at 20). *Markman v. Westview Instruments*, 517 U.S. 370, 391 (1996).

If the Court finds this term definite, Defendants request the construction: “explains meaning or importance to the specific user.” The first half is undisputed and echoes the applicants’ statements during prosecution. *See, e.g.*, Ex. 49 (’217, 02/04/02 Amendment) at 113. The second half (“to a specific user”) clarifies that the “significance” must be relative to each user. To the extent the specification provides any guidance, it is in the Wall Street Week example. There, the host says, “here is what *your* portfolio did,” as each subscriber “sees *his own specific* performance information,” and the “*meaning* [of that information] becomes clear.” ’217, 14:5-27. Unless we are to completely depart from the specification, this must constrain the significance to the particular user. PMC appears to argue that Defendants’ construction requires that a significance be explained only to a *single* user. Not so. One medium can explain the meaning or importance of the other medium *to each specific user* without being unique to *one* user—*e.g.*, a weather program with an insert showing the school closures in the user’s own town.

**20. “content / determining content / identify[ies/ing] [said] content” (Term 22)**

PMC agrees that Defendants’ constructions are “consistent with the Court’s prior ruling” in *Phase 2*, and “does not necessarily object to these proposals.” Br., 21. These constructions were and are supported by the intrinsic evidence. *Phase 2*, 86-89; Ex. 40, 32-33; Ex. 41, 26; Ex. 42, 3.

Nevertheless, for the first time in its Opening Brief, PMC asks the Court to “clarif[y]” that “determining” or “identifying” content is not “limited to machine recognition of the content.” Br., 22. PMC’s addition is untimely, and its meaning unclear. PMC’s “clarification” also contradicts the claim language, which recites, for instance, that “determining content” is performed “through use of processor instructions.” ’217, cl. 1. While the Patent Office did state that identifying content could encompass additional steps that are not limited to “machine recognition” (Br. 22), the applicants did not endorse the statements. PMC’s argument is also barred by collateral estoppel. *Allergan Sales, LLC v. Sandoz Inc.*, 2016 WL 1224868, at \*13 (E.D. Tex. Mar. 29, 2016) (“Sandoz is precluded from seeking a different construction than that set forth by the Court in *Allergan I.*”).

**21. “digital data channel” (Term 9)**

Defendants propose “digital data channel” means “[b]roadcast or cablecast that carries digital information,” while PMC proposes “[a] channel that carries exclusively or predominantly digital information.” Consistent with Defendants’ construction, the patents teach that a digital data channel is formed by embedding digital information in a broadcast or cablecast transmission. ’490, 20:16-69 (cablecast with “recipe in encoded digital form”), ’217, 11:25-62 (“digital information” in “broadcast”), ’217:5-10. Nevertheless, PMC faults Defendants’ construction for not including telephone transmissions. Br., 23. But PMC’s citations do not teach that a telephone is a “digital data channel.” *Id.* They disclose a “stockbroker” may “telephone[] microcomputer, 205” to input data about a user’s stocks, and the microcomputer then *receives* “closing stock price data” as digital data in a cablecast transmission. ’217, 231:24-53, 217:21-40. Thus, the phone transmission isn’t

the digital data channel—the cablecast is. This *comports* with Defendants’ construction.

Further, by introducing a term of degree, “predominantly,” PMC’s construction would render the phrase indefinite as the patents provide no guidance on when a channel carries “predominantly” digital information. *Intellectual Ventures I LLC v. T-Mobile USA, Inc.*, 902 F.3d 1372, 1381 (Fed. Cir. 2018) (terms of degree that depend “on the unpredictable vagaries of any one person’s opinion” are indefinite). PMC’s construction is also inconsistent with the patents, which teach “digital data channels” formed by embedding digital data in a predominantly analog transmission. *See* ’490, 20:16-69; ’217, 11:25-62, 43:52-44:59. For instance, in the “Julia Childs” embodiment a viewer receives a digital data channel comprising an analog cable channel with a “recipe in encoded digital form.” ’490, 20:16-69. If anything, the digital data channel in this embodiment is “predominantly” analog, not digital. *See Apple* at 17-18 (Patent Office concluding Julia Childs embodiment didn’t support limitation requiring “all-digital data channel”). And to the extent there is doubt as to whether it is predominantly analog or digital that simply exposes the inherent ambiguity in PMC’s construction.

**22. “process[ing] only a signal of said [subset of said] plurality of signals that includes an identifier that matches said predetermined identifier to provide said first medium” (Term 5)**

Defendant’s construction of this phrase as “process less than all of the signals in the [subset of said] plurality of signals,” follows from the claim language. For instance, Claim 11 says expressly that the receiver station “processes *only* a signal” in the subset of received signals “that matches” the identifier, and therefore indicates that the receiver station does not process signals in the subset that do not match. Defendants’ construction gives meaning to the claim term “*only*” by requiring that less than all of the signals be processed, while PMC attempts to eliminate this term. *Merck & Co., Inc. v. Teva Pharm. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) (“[C]laim construction that gives meaning to all the terms of the claim is preferred over one that does not”).

PMC's proposal that "subset of said plurality of signals" be construed as "less than or equal to another set of signals" seeks to nullify the term "subset" altogether by allowing the subset to be the same as the set. The Court has previously rejected PMC's argument: "The Court construes 'subset of [a/said] plurality of signals' to mean 'less than all of another set of signals.'" *Phase 2* at 27. As the Court found, the "claim language explicitly rejects PMC's interpretation of 'some or all,'" and "PMC has not identified any teaching in the specification" supporting its position. *Id.* Moreover, PMC's argument is barred by collateral estoppel. *Allergan*, 2016 WL 1224868, at \*13.

### **23. "processor" (Term 2)**

"Processor" is a commonly understood word that requires no construction. If the Court find otherwise, it should adopt its prior construction: "a device that processes data." *Phase 1* at 61.

PMC asks the Court to discard its prior construction of "processor," and to construe the term to mean "a device that performs operations according to instructions," arguing that "in the context of these patents" the term "processor" should be limited to exclude "fixed-function processors." Br., 24. But the intrinsic evidence and claim language of the asserted patents do not support PMC's argument, and teach that the processor *can* be a fixed-function processor. For example, asserted claims 16 and 20 of the '217 patent recite "identifying, using a processor, content of a first medium" to output a multimedia presentation. '217, cls. 16, 20. Decoder 203, illustrated by Figure 2A in the '490 patent, is a fixed-function processor. '490, 19:42-20:7. It identifies appropriate signals and transfers them to microcomputer 205 to output a multimedia presentation. *Id.*; *see also id.* at Fig. 2A (showing fixed-function signal-processing blocks such as filters and detectors), 9:27-40 (describing the decoder as having specific signal identification and processing functions). There simply is no basis to limit the claims in the way PMC requests.

### **24. "processor instruction[s]" (Term 3)**

"Processor instruction[s]" requires no construction either. Indeed, PMC previously



advocated that “processor instructions” are plainly understood, quoting an opposing expert: “Dr. Neuhauser admitted that one of ordinary skill in the art would understand the meaning of the term ‘processor instructions’ because ‘we use it all the time.’” *Amazon I* at 14, 17. PMC nevertheless asks the Court to adopt a prior construction (“commands or signals that are executed by, or instruct, a processor to perform operations”) that would broaden the plain meaning of the phrase to include signals.<sup>13</sup> While construing “processor instructions” to include “signals” may not have conflicted with the claims in the prior case, it does here with **all** of the asserted claims that recite this term. Claims 11 and 20 of the ’217 patent recite “**execution** of processor instructions.” But signals are not executed. And claim 1 of the ’217 patent twice recites “processor instructions **resident** on said computer.” Instructions reside on computers, but signals travel to transmit information. *See, e.g.*, ’490, 19:59-67.

## 25. “operating instructions”/ “reprogramming said processor” (Term 29)

The primary dispute for both terms (in Claim 1 of the ’344 patent) is whether they should be construed to require “rewriting or revising the operating system” consistent with PMC’s prosecution disclaimer and past constructions (Defendants), or whether it should include rewriting or revising other software such as application software (PMC).

Operating instructions: Defendants’ construction of operating instructions—“software that controls the basic functionality of the processor by rewriting or revising the operating system itself”—mirrors PMC’s statements to the Patent Office. Specifically, during reexamination of the ’277 patent<sup>14</sup>—which recites a similar limitation of receiving “new operating instructions addressed to said processor ... to thereby reprogram said processor” (claim 12)—PMC distinguished the prior art (including references at issue in the co-pending ’344 patent asserted

<sup>13</sup> PMC did not advance this construction in the prior case. *See Phase 2* at 11-13.

<sup>14</sup> The ’277 patent shares the same specification as the asserted patents.

here) by arguing that “[o]perating instructions are well known in the art to be *software that controls the basic functionality of the processor by rewriting or revising the operating system itself.*” Ex. 51 (’277, 03/19/10 Request for Rehearing) at 14.<sup>15</sup> The Board accepted PMC’s arguments in the ’277 patent, which PMC then submitted to the Examiner in the ’344 patent resulting in the ’344 patent issuing less than a month later. Ex. 54 (’344, 3/20/10 Applicant Correspondence) at 1 (“Patent Owner of the ’277 Patent ... makes certain arguments as to the concept of reprogramming a reprogrammable system with new operating instructions which are pertinent to the examination of the application you are now reviewing.”); Ex. 55 (’344, 4/14/10 Notice of Allowance); Ex. 56 (’277, 09/27/10 BPAI Decision) at 5-6. PMC relies on the disclosure in the ’490 specification of a “read only memory for recording permanent operating instructions” and “a programmable random access memory controller ... that permits revision of operating instructions.” Br., 27 (citing ’490, 5:16-20) (emphasis in original). From this disclosure, PMC argues that “[i]f operating instructions can be either permanent or potentially revised ... ‘operating instructions’ cannot be limited to software that rewrites or revises the operating system.” Br., 27. But “permanent operating instructions” is a different term than “operating instructions.” The claims at issue here recite “first operating instructions” and “second operating instructions” and expressly state they are “different from permanent operating instructions.” ’344, cl. 1. The claims also teach that the “operating instructions” are used for “reprogramming” the receivers station, and thus there is no doubt they *are* revisable. Similarly, PMC’s citation to “preprogrammed... operating instructions” of “firmware” (Br., 27) that “control memory or RAM capacity in detecting end of file signals,” ’217, 35:63-66, are not “operating instructions” that reprogram a processor as

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<sup>15</sup> PMC repeatedly distinguished the prior art by arguing that prior art receives application software, not “operating instructions” which must “rewrite or revise the operating system.” *See, e.g.*, Ex. 52 (’277 re-exam, 08/01/05 Amendment) at 63, 66-67; Ex. 53 (’277 re-exam, 08/16/06 Appeal Brief) at 69, 71. The prior art at issue was also at issue in the ’344 patent.

required by the claims ('344, cl. 1), and cannot overcome the clear prosecution disclaimer discussed above. *Uship*, 714 F.3d at 1315-16.

Ignoring its disclaimer, PMC argues for the first time in its Opening Brief that the Court should adopt a broader construction, “computer instructions or software that controls,” which it asserts is consistent with the plain meaning of the term. Br., 26-27. Although the *Motorola* Court adopted this construction with respect to claim 55 of the '277 patent, it appears that the Court did not have PMC's statements in the '277 reexamination before it. See *PMC v. Motorola*, 2:08-CV-70-CE, Dkt. Nos. 136, 149. In any event, PMC's statements as to the “well known” meaning of “operating instructions” should be controlling. *Jack*, 302 F.3d at 1361-62.

“Reprogramming said processor”: This term should be construed as: “[r]ewriting or revising processor instructions to change at least a portion of the operating system,” adopted from the construction PMC advocated for and the court adopted in *Scientific-Atlanta*. In *Scientific-Atlanta*, PMC argued that the term “reprogramming” in the limitation of receiving “operating instruction from said source and selectively reprogramming at least a portion of said system” should be construed to mean “*rewriting or revising at least a portion of the operating system.*” *Scientific-Atlanta* at 330. The court agreed. *Id.* at 345. Here too, the construction is consistent with PMC's prosecution disclaimer during reexamination of the '277 patent, which recites the nearly identical limitation of “reprogram said processor.” Indeed, PMC repeatedly distinguished the prior art by pointing to the construction of reprogramming in *Scientific-Atlanta*, and arguing that “none of the applied references teach downloading to reprogram an operating system, at best, they disclose downloading application software.” Ex. 52 ('277 re-exam, 08/01/05 Amendment) at 62-63, 64-67, Ex. 53 ('277 re-exam, 08/16/06 Appeal Brief) at 70-71.

Yet, PMC attempts to walk back its prior statements and disclaimer. It now argues that the

patents disclose reprogramming things other than the operating system. Br., 25. Although PMC identifies disclosures about “preprogramming,” it is “reprogramming said processor” that is being construed. *Id.* (citing to ’217, 186:18). And disclosure about “modif[ing] information [in a] file” do not disclose “reprogramming *said processor*.” *Id.* at 25-26 (citing ’217, 285:28-32, 262:26-28).

Finally, PMC’s argument that reprogramming can be satisfied merely by “adding additional instructions,” rather than revising the system or software, should be rejected. Br., 26. PMC clearly and unambiguously told the Patent Office that adding additional software was insufficient to reprogram. Ex. 52 at 63-65 (downloading “application software” on top of operating system is not reprogramming); Ex. 51 at 18 (“merely granting the system additional functionality is not” reprogramming); Ex. 75 (’344 FH, 3/16/2010 Applicant Correspondence) at 1 (“As we discussed, a fundamental difference exists between programming the operation of a receiver and simply adding programming over a resident control program as taught by Hedger”).

**26. “said receiver station having a data network connection to an external network” (Term 14)**

PMC seeks to rewrite the claims to replace “external” with “remote.” PMC doesn’t dispute that “external” is understandable to a juror, but argues its rewrite is needed “to make clear that the ‘data network connection to an external network’ includes ultimate connection to a remote network, not just connection to a local network.” Br., 27-28. However, the figures PMC cites merely note that signals and programming are received from “telephone or other data transfer networks” and “other inputs.” *See, e.g.*, ’217, Figs. 2, 2D, 3. Nothing limits these inputs to a *remote* network—the network is simply external to the signal processor. *Id.* And other embodiments, such as those illustrating local networks (*e.g.*, Fig. 2), are also *not* limited to remote networks.

**27. “generating a query at said receiver station” (Term 15)**

Defendants propose that this term be construed as “telephoning a remote site to get

additional instructions” because this is the only disclosure of generating a query in either the ’344 patent or the ’490 patent. Specifically, the patents disclose a receiver station includes a “telephone dialing device 24” (called an “auto dialer”) that “telephones a remote site to get an additional signal or signals.” ’490, 15:20-25, Fig. 1; ’217, 141:46-50. During prosecution, PMC identified these precise disclosures as *the* written description support for “generating a query.” Ex. 57 (’344, 3/1/02 Amendment) at 10. Even PMC’s citations support Defendants’ construction. For example, PMC cites to a disclosure that the receiver station can be connected to an “other data transfer network.” But the patent explains that the receiver station connects to the other network via “*telephone* connection 22.” ’490, Fig. 1; ’217, Fig. 2. PMC also relies on a disclosure that “microcomputer 205, has an installed modem.” Br., 28 (citing ’217, 231:24-26). But the intrinsic record confirms the modem is connected to other networks via a *telephone*. Ex. 58 (’251, 3/20/09 Appeal Decision) at 30 (“modem” connecting to “telephone line”); Ex. 59 (’217, 1/31/06 Examiner’s Answer) at 27 (“modems” are “telephone interconnection devices.”); ’217, 231:24-29 (modem “answer[s] telephone calls” from “stockbroker”). PMC’s construction, by going beyond the only disclosure of generating a query would impermissibly “expand the scope of the claims far beyond anything described in the specification.” *Kinetic*, 554 F.3d at 1019; *Wisconsin*, 905 F.3d at 1351.

**28. “determining the absence of complete generated television image data” (Term 15)**

The ’528 patent claims a method for “determining the absence of complete generated television image data” in order to prevent the “monitor from displaying an incomplete television image.” *See* ’528, cl. 21. The parties dispute whether this term refers to data that is generated by the user’s receiver station and overlaid on top of the conventional television programming as the intrinsic evidence shows (Defendants) or only includes that underlying television programming contrary to that disclosure (PMC). The portion of the specification that relates to the specific invention claimed in the ’528 patent concerns steps taken “to prevent microcomputers, 205, that

fall behind from displaying *incomplete overlays*.” See PMC Tutorial at 24 (quoting ’217, 233:28-34); Br., 29-30 (citing the same); Defendant Tutorial at 60 (citing the same). The only relevant passage in the specification that concerns the distinction between “complete” and “incomplete” data relates to the overlay data. See *id.* (citing ’217, 64:12-41 (discussing “conditional-overlay-at-205 instructions”), 233:10-56 (discussing preventing display from showing incomplete overlays)). There is no discussion in the specification about “incomplete” television programming.

Indeed, even the portions of the specification cited by PMC acknowledge that “*complete* generated television image data” refers to the data used to generate the personalized overlay. For example, PMC cites a discussion of the “Wall Street Week” program in which the performance of the user’s personal stock portfolio *is overlaid* on top of a television program. Br., 29 (citing ’217, 14:1-5). That passage says that overlaid image “is the microcomputer generated graphic.” ’217, 14:17-18. It is not the underlying television programming. The Court should, therefore, construe this term as Defendants have proposed. *Bell*, 262 F.3d at 1271-73.

**29. “advancing to subsequent information received in said information transmission” (Term 35)**

In its brief, PMC argues that this term “*simply means moving to a later part of an information transmission*, which is distinct from ‘television programming.’” Br., 30. Defendants’ construction is “skipping to a later point in time in the television programming.” The parties thus agree on at least the first portion of the construction: skipping (or moving) to a later part (point). The dispute is over *what* is being skipped. PMC argues that the specification teaches skipping “instructions” without skipping “television programming.” See Br., 30. Although a skipped television program might ultimately result from skipping instructions, to narrow the issues before the Court Defendants propose the Court construe this term as “moving to later instructions received in or with a television signal.” See ’217, 39:51-52, 73:49-52, 235:10-15, 235:28-33, 8:19-40.

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**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that all counsel of record who have consented to electronic service are being served with a copy of this document via ECF on January 31, 2020.

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